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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,619	08/05/2003	Joseph Stellbrink	200205881-1	5373

22879 7590 07/06/2005

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EXAMINER

HSIEH, SHIH WEN

ART UNIT PAPER NUMBER

2861

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/633,619	Applicant(s) STELLBRINK ET AL	
	Examiner Shih-wen Hsieh	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.  
2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-10, 12-28, 30-34 and 36-53 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 26-28, 30-34 and 36-53 is/are allowed.  
6) ☒ Claim(s) 1-3, 5-10, 14-18 and 22-25 is/are rejected.  
7) ☒ Claim(s) 12, 13 and 19-21 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8-5-03; 1-24-05</u> . | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. The indicated allowability of claims 1-53 is withdrawn in view of the newly discovered reference(s) to Kanda et al. (US Pat. No. 6,447,095 B1). Rejections based on the newly cited reference(s) follow.

***Specification***

2. The disclosure is objected to because of the following informalities:

Page 10, [0034], line 8, should the "printer cartridge" be "printer carriage"?

Please advise.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3, 5-10, 14-18 and 22-25 are rejected under 35 U.S.C. 103(a) as being obvious over Bohorquez et al. (US Pat. No. 5,682,186) in view of Swanson et al. (US Pat. No. 5,646,665).

The applied reference has a common assignee (H & P) with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2). Instant application and

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the two references deal with an ink cartridge having a capping device instead of a capping station disposed in a so-called home position (HP).

In regard to:

Claim 1:

Bohorquez et al. teach in their figs. 1 and 2:

An inkjet consumable cartridge, comprising:

an inkjet cartridge (14) having nozzles (20), refer to col. 3, lines 40-55.

The device of Bohorquez et al. DIFFERS from claim 1 in that it does not teach:  
an inkjet cartridge holding device for holding the inkjet cartridge.

A carrier or carriage in an ink jet printer is usually used to hold ink cartridge(s).

To this end, Swanson et al. teach in their figs. 1, 2 and 6 a carriage (12) having cartridge holders as shown in fig. 6 for holding cartridges as shown in figs. 2B and 2C.

Therefore it would have been an obvious matter that the drawings shown in Bohorquez et al.'s invention will have to be installed into holders of a carriage so as to be functioned as a printer in a way to be understandable to a person having ordinary skill in the art.

Bohorquez et al. further teach:

a cap (12) configured to interface with the inkjet cartridge, refer to col. 3, lines 40-4815-17; and

a cap actuator (58, figs. 3 and 4) that, when actuated, moves the cap from a position where the cap does not interface with the inkjet cartridge to a position where

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the cap interfaces with the inkjet cartridge sealingly covering the nozzles, refer to col. 5, lines 42-45; wherein

the consumable cartridge is removable from a printer as a self-contained unit, refer to fig. 1, that means the ink cartridge 14 with its integral capping device is a single unit, and can be installed or reversely, removed from its holder as shown in fig. 2, and also since ink is consumed during the operations of the printer, therefore, it is consumable.

Claim 2:

Bohorquez et al. further teach:

wherein the cap interfaces with the inkjet cartridge at a nozzle plate (16, fig. 1) on the inkjet cartridge, refer to figs 1 and 2.

Claim 3:

Bohorquez et al. further teach:

wherein the cap maintains a high humidity environment around nozzles in the inkjet cartridge when the inkjet cartridge is in the inkjet cartridge holding device and the cap interfaces with the inkjet cartridge, refer to col. 4, lines 20-31.

Claim 5:

The device of Bohorquez et al. as modified in view of Swanson et al. DIFFERS from claim 5 in that it does not teach:

wherein the inkjet cartridge holding device permits the inkjet cartridge to move while inside the inkjet cartridge holding device.

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Figs. 2B, 2c and 4 of Swanson et al. further teaches an ink cartridge (20), when inside the holder (18, Swanson et al. called it a cartridge compartment), further movement of the insertion will allow the ink cartridge properly dispose inside the holder.

Therefore it would have been an obvious matter that once ink cartridge is inside the holder, further movement of the ink cartridge will put the cartridge in a proper position inside the holder.

Claim 6:

The device of Bohorquez et al. as modified in view of Swanson et al. DIFFERS from claim 6 in that it does not teach:

wherein the inkjet cartridge holding device permits the inkjet cartridge to pivot while inside the inkjet cartridge holding device.

Swanson et al. further teach in their figs. 4 and 5, the cartridge (20) is pivoted about axis P (fig. 5) and rotated to be properly positioned, refer to col. 5, line 1+.

Therefore it would have been an obvious matter that a rotate of the ink cartridge about a pivot axis as taught by Swanson et al. will properly positioned the ink cartridge inside the holder (cartridge compartment).

Claim 7:

The device of Bohorquez et al. as modified in view of Swanson et al. DIFFERS from claim 7 in that it does not teach:

a component that pivots the inkjet cartridge while the consumable cartridge is installed into a printer.

Swanson et al. further teach a datum surface (40, fig. 3B) and associated surface (42, fig. 4) renders a torque T, which rotates cartridge (20) about pivot axis P, refer to col. 5, lines 18-24.

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Bohorquez et al. to include the datum surface (40) and its associated surface (42) as further taught by Swanson et al. for the purpose of producing a torque T when these two surfaces meet together during the insertion of the ink cartridge, and rotating the ink cartridge to properly position the ink cartridge inside the holder.

Claim 8:

The apparatus of claim 5, wherein the inkjet cartridge holding device permits the inkjet cartridge to pivot and connect to a printer carriage in a printer when the consumable cartridge is installed into the printer.

Rejection:

This claim is rejected on the basis as set forth for claim 6 discussed above. In this claim, the printer carriage is Swanson et al.'s (12), the ink jet cartridge holding device is the compartment (18) and the pivoting to connect to a carriage is as shown in Swanson et al.'s figs. 2B, 2C and 4.

Claim 9:

The apparatus of claim 8, wherein the cap actuator, when actuated, moves the cap to interface with the inkjet cartridge and maintain a high humidity environment



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around nozzles in the inkjet cartridge while the inkjet cartridge is connected to the printer carriage.

Rejection:

This claim is rejected on the basis as set forth for claim 3 discussed above.

Claim 10:

The apparatus of claim 9, wherein the cap actuator, when actuated, moves the cap from interfacing with the Inkjet cartridge while the inkjet cartridge is connected to the printer carriage.

Rejection:

This claim is rejected on the basis as set forth for claim 3 discussed above. (This claim corresponds to the cap is open, or the cap is not covering the head).

Claim 14:

Bohorquez et al. further teach:

wherein the cap comprises an elastomeric material, refer to col. 4, lines 20-23.

Claim 15:

Bohorquez et al. further teach:

wherein the cap is substantially rectangular in shape, refer to figs. 1-4 for the rectangular shape of cap 12.

Claim 16:

Bohorquez et al. further teach:

wherein the cap has four side-walls forming the sides of the rectangle and a bottom surface, an open space being present between the four walls and the bottom

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surface, the space adapted to encompass the nozzles of the inkjet cartridge when the cap interfaces with the inkjet cartridge, refer to fig .1, the space surrounded by the walls is designated by numeral (36).

Claim 17:

Bohorquez et al. further teach:

wherein the cap is of a monolithic structure, refer to figs. 1-4.

Claim 18:

The device of Bohorquez as modified in view of Swanson et al. DIFFERS from claim 18 in that it does not teach:

wherein the consumable cartridge pivots the inkjet cartridge about 30 degrees when the inkjet cartridge is in the inkjet cartridge holding device.

From Swanson et al. fig. 4, the plane where the datum surface 40 is disposed is roughly made an angle of 30 with the horizontal plane.

Therefore it would have been an obvious matter that during the insertion of the ink cartridge into its holding device, a certain angle is existed as indicate in Swanson et al.'s fig. 4 so as to rotate the cartridge during the insertion process to properly position the cartridge inside the holder.

Claim 22:

Bohorquez et al. further teach:

A printer utilizing the consumable cartridge of claim 1, refer at least the Title.

Claim 23:

Bohorquez et al. further teach:

where the cap interfaces with the inkjet cartridge until the consumable cartridge is installed in the printer and a print command is received by the printer.

Rejection:

Bohorquez et al. shows in their figs. 2 and 3 that the cap is in the close position, and also Bohorquez et al. teach when the cap closes the head, the printer is not in printing operation. Therefore, based on the function of the cap, it closes the head can be either when the printer is not performing printing, or the cartridge with the integral cap first installed into the printer. The cap stays closed as the purpose of cap is to cover the head to avoid ink in the head because viscous in its initial installation or waiting for printing until a print command is received by the printer. This claim carries less patentable weight.

Claim 24:

A method of making an inkjet consumable cartridge, comprising:

obtaining an inkjet cartridge having nozzles;

placing the inkjet cartridge in an inkjet cartridge holding device;

obtaining a cap configured to interface with the inkjet cartridge;

attaching the cap to a cap actuator; and

attaching the cap actuator with the cap to the inkjet cartridge holding device such that, when actuated, the cap actuator moves the cap from a position where the cap does not interface with the inkjet cartridge to a position where the cap interfaces with the inkjet cartridge sealingly covering the nozzles; wherein

the consumable cartridge is a self-contained unit.

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Rejection:

The steps in this method claim are deemed to be made obvious by the functions of the structure in the combination as discussed above for claim 1.

Claim 25:

The method of claim 24, wherein the cap maintains a high humidity environment around nozzles in the inkjet cartridge when the inkjet cartridge is in the inkjet cartridge holding device and the cap interfaces with the inkjet cartridge.

Rejection:

This claim is rejected on the basis as set forth for claim 3 discussed above.

***Allowable Subject Matter***

5. Claims 26-28, 30-34 and 36-53 are allowed.
6. Claims 12, 13, 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter:

In regard to:

Claim 12 and 13:

The primary reason for the allowance of claims 12 and 13 is the inclusion of the limitation of wherein the inkjet cartridge holding device retains the inkjet cartridge when the consumable cartridge is removed from a printer. It is this limitation found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claim allowable over the prior art.

Claims 19-21:

The primary reason for the allowance of claims 19-21 is the inclusion of the limitation of wherein the cap actuator comprises an actuator arm that interfaces with a printer and reacts to a force imparted to the arm by the printer. It is this limitation found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claim allowable over the prior art.

Claims 26-28, 30-34 and 36-51:

The primary reason for the allowance of claims 26-28, 30-34 and 36-51 is the inclusion of the limitations of an inkjet consumable cartridge comprises an inkjet cartridge having nozzles; a print media holding device; and a cap actuator that, when actuated, moves the cap from a position where the cap does not interface with the inkjet cartridge to a position where the cap interfaces with the inkjet cartridge sealingly covering the nozzles. It is these limitations found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claim allowable over the prior art.

Claims 52 and 53:

The primary reason for the allowance of claims 52 and 53 is the inclusion of the method steps of obtaining an inkjet cartridge having nozzles; obtaining a print media holding device; and attaching the cap actuator with the cap to the inkjet cartridge holding device such that, when actuated, the cap actuator moves the cap from a position where the cap does not interface with the inkjet cartridge to a position where the cap interfaces with the inkjet cartridge sealingly covering the nozzles. It is these steps found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claim allowable over the prior art.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,523,933, "Media cartridge and image recording apparatus with detachably mountable media cartridge" issued to Hirano et al., 2/2003 teaches a media cartridge (100, fig. 5) connected to an image recording unit (2, fig. 1). The media cartridge has ink containing portion (104) and sheet containing portion (103). The ink containing portion corresponds to the ink cartridge in the instant application, however, Hirano et al.'s ink containing portion does not have nozzles. Instead, the nozzles are disposed in the recording head (12), refer to figs. 2 and 3. Hirano et al. also teach a cap (150) as shown

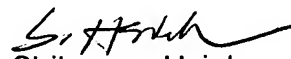
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in figs. 6, 10 and 11, etc.). This cap is a part of the media cartridge. However, Hirano et al. does not teach a cap actuator as most printer do. Instead, the capping situation is done by the deformation of the wire (5), refer to fig. 11B, col. 5, lines 60-65 and col. 11, lines 12-17.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 571-272-2256. The examiner can normally be reached on 7:30AM -5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Talbott can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). **SHIH-WEN HSIEH**  
**PRIMARY EXAMINER**

  
Shih-wen Hsieh  
Primary Examiner  
Art Unit 2861

SWH



July 5, 2005